

Cellular Respiration Worksheet

1. ____ When living cells break down molecules, energy is
 - a. stored as ADP.
 - b. stored as ATP.
 - c. released as heat.
 - d. Both b and c
2. ____ In cellular respiration, the most energy is transferred during
 - a. glycolysis.
 - b. lactic acid fermentation.
 - c. the Krebs cycle.
 - d. the electron transport chain
3. ____ Electrons are donated to the electron transport chain by
 - a. ATP and NADH.
 - b. FADH₂ and NADH.
 - c. ATP and NAD⁺.
 - d. NAD⁺ and ATP.
4. ____ The breakdown of organic compounds to produce ATP is known as
 - a. cellular respiration
 - b. alcoholic fermentation
 - c. lactic-acid fermentation
 - d. photosynthesis
5. ____ Glycolysis begins with glucose and produces
 - a. PGAL
 - b. lactic acid
 - c. pyruvic acid
6. ____ The electron transport chain is driven by two products of the Krebs cycle.
 - a. oxaloacetic acid and citric acid
 - b. H₂O and CO₂
 - c. NADH and FADH₂
 - d. acetyl CoA and ATP
7. ____ Acetyl coenzyme A
 - a. is formed from the breakdown of pyruvic acid.
 - b. enters the Krebs cycle.
 - c. can be used in synthesis of needed molecules.
 - d. All of the above

8. ____ Which of the following is not part of cellular respiration?

- a. electron transport b. the Krebs cycle c. glycolysis d. the Calvin cycle

9. ____ Water is an end product in

- a. lactic acid formation. c. the Krebs cycle.
b. fermentation. d. the electron transport chain.

10. ____ The final electron acceptor for the electron transport chain of aerobic respiration is which of the following?

- a. hydrogen b. water c. ATP d. oxygen

11 ____ Glycolysis takes place

- a. in the cytoplasm c. only if oxygen is present
b. in the mitochondria d. only if oxygen is absent

12. ____ Yeast produce alcohol and CO₂ in the process of

- a. lactic acid fermentation c. alcoholic fermentation
b. aerobic respiration d. glycolysis

13. ____ In cellular respiration, the most energy is transferred in which step?

- a. glycolysis b. electron transport chain c. Krebs cycle d. fermentation

14. ____ The conversion of pyruvic acid to carbon dioxide and ethanol is called

- a. lactic acid fermentation b. alcoholic fermentation c. gasohol conversion d. glycolysis

15. ____ In aerobic respiration, glucose molecules are converted into acetyl CoA molecules when they enter

- a. the electron transport chain c. glycolysis
b. the Krebs cycle d. the Calvin cycle

16. ____ Glycolysis and oxidative respiration are different in that

- a. glycolysis occurs on the cell membrane, while oxidative respiration occurs in mitochondria
b. glycolysis occurs only in photosynthesis, while oxidative respiration is part of cellular respiration
c. glycolysis occurs in the absence of oxygen, while oxidative respiration requires oxygen
d. both of these terms are different names for the same process

17. ____ Aerobic processes require ____ in order to take place.

- a. sunlight b. water c. oxygen d. carbon dioxide

18. ____ To maximize ATP production, glycolysis must be followed by

- a. fermentation b. the Krebs cycle c. The Calvin cycle d. photosynthesis

19. ____ When muscles are exercised extensively in the absence of sufficient oxygen,

- a. lactic acid is produced c. a large amount of ATP is formed
b. NADH molecules split d. oxidative respiration occurs



20. ____ The process shown in the equation above begins in the cytoplasm of a cell and ends in the

- a. cytoplasm. b. endoplasmic reticulum. c. mitochondria. d. lysosome.

21. ____ The equation above summarizes the process known as

- a. photosynthesis. b. cellular respiration. c. fermentation. d. protein breakdown.

22. ____ The molecule referred to as “molecule A” in the equation above is

- a. NADPH. b. NADH. c. ATP. d. ADP.